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Dominic,

Attached are the BTAG comments on
the Site 1 Report that Todd provided.

- Steve

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

July 7, 2003

SUBJECT: Draft Site 1 Risk Assessment for Soil and BERA Step 4 Work Plan for Site 1 Soils;
Allegany Ballistics Laboratory, Short Gap, West Virginia; May 2003

FROM: Bruce R. Pluta, Coordinator
Biological Technical Assistance Group

TO: Todd Richardson (3HS13)
Federal Facilities Section

Representatives of the BTAG have completed the review of the subject documents. We appreciate the opportunity to provide input prior to sample collection.

RISK ASSESSMENT REPORT

In general, the BTAG concurs with the methods employed and the conclusions reached in the screening level risk assessment and baseline problem formulation. The following comments address specific omissions and recommended changes.

7.3.1.3 Preliminary Conceptual Model

Based on previous site visits, the BTAG categorizes the primary habitat type in Site 1 as forested floodplain. The red fox and red-tailed hawk are not appropriate receptors for this habitat type. Long-tailed weasel and red-shouldered hawk are representative of terrestrial mammalian carnivores and avian carnivores, respectively, in this habitat type. The BTAG recommends that these receptors be substituted and the food chain models revised accordingly.

7.3.6.1 Refinement of Conservative Screening Assumptions

In the first bullet, both the mean and 95% upper confidence limit should be evaluated in the refined models. The range of potential risk should be considered in determining the locations to sample and the contaminants to analyze in Step 4.

In the fourth bullet, spatial distribution, not simply frequency of detection, should be the characteristic used in refining the list of contaminants.

7.4.1.3 Preliminary Conceptual Model

An avian species that feeds primarily on emergent benthic invertebrates is missing from the list. The BTAG recommends that the tree swallow, which is present on the site, be added to the list.

and evaluated in the food chain model.

7.4.6.4 Risk Evaluation

In evaluating the benthic invertebrate survey data, temporal differences between sediment samples and invertebrate surveys could also be a factor in poor correlation. Sediment samples provide a point assessment that can change dramatically based on water flow. In contrast, benthic invertebrates integrate exposures over months and years. Thus, changes in invertebrate communities may not correlate with sediment concentrations at a single point in time even when contaminants are impacting populations.

7.7.2 Recommendations

While it may be acceptable to address sediment and aquatic receptors under the Long Term Monitoring Plan (LTMP), no details are provided on how this will be accomplished. The BTAG contends that details on necessary revisions to the LTMP be provided for BTAG review prior to initiating sampling for the 2004 report.

BERA STEP 4 WORK PLAN

In general, the BTAG concurs with the proposed sampling plan. The following comments address specific omissions and recommended changes.

3.1.1 Overview of Proposed Sampling and Appendix A

The ten surface soil samples should be homogenized composites of 0-12 inch soil cores.

The BTAG strongly recommends that the surviving earthworms be analyzed for TAL metals and TCL PAHs. These data can be critical to interpretation of bioassay results and development of PRGs if remediation is warranted.

Based on Fig 3-1, bioassay and biological sampling locations only overlap at two locations (transect 1 and transect 9). The other locations were selected to target either organic or inorganic contamination, but not both. In the event that sufficient earthworm tissue cannot be obtained at the other biological sampling locations, use of bioassay earthworms from "the five samples closest to the proposed biota sampling locations" has been proposed. The BTAG contends that this approach is not likely to accurately reflect earthworm concentrations in the dioxin/furan areas. If sufficient mass is unavailable, five separate 28-day earthworm bioaccumulation assays should be conducted using soil collected from the locations with dioxin/furan contamination.

Appendix E

BTAG should be provided with a copy of the earthworm bioassay protocol prior to initiating any testing to avoid quality control and quality assurance issues that may invalidate the data.

Thank you for the opportunity to review this document. Please feel free to contact me at x-2380 or

Kathy Patnode at (814) 234-4090 x 231.